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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,380	04/22/2004	Atsuhiro Hayashi	H-1139	7082

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EXAMINER	
LAM, TUAN THIEU	

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/829,380	HAYASHI ET AL.	
	Examiner	Art Unit	
	Tuan T. Lam	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *14-27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/22/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Per response to the Election species filed 7/15/2005, claims 1-13 has been elected for further examination. Claims 14-27 have been withdrawn from consideration.

Claim Objections

1. Claim 9 is objected to because of the following informalities: the recitation of "can be" is not a positive recitation. It is suggested to change it to --is--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Muljono et al. (USP 6,538,464). Figure 5 shows a semiconductor integrated circuit comprising an output circuit comprising a plural output MOSFETS (521A to 521C; 523A to 523C), a first control means (means to generate P-IMP <0:P> and N-IMP <0:Q> signals) that, from among the plural output MOSFETS, selects the number of output MOSFETS to be turned on to control output impedance; and a second control means (means to generate N-SLEW <0:N> , P-SLEW <0:M> signals) that controls slew rate by controlling a drive signal of the output MOSFETS turned on as called for in claims 1-3 and 7- 8.

Regarding claim 4, figure 5 shows the predriver buffer 503.

Regarding claims 5-6, figure 6 shows the resistance element 607 having resistance value

greater than the on resistance of the output MOSFETs.

Regarding claim 12, figure 7 shows a resistance element (713).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muljono et al. (USP 6,538,464).

Figure 5 shows a semiconductor integrated circuit comprising an output circuit comprising a plural output MOSFETS (521A to 521C; 523A to 523C), a first control means (means to generate P-IMP <0:P> and N-IMP <0:Q> signals) that, from among the plural output MOSFETS, selects the number of output MOSFETS to be turned on to control output impedance; and a second control means (means to generate N-SLEW <0:N> , P-SLEW <0:M> signals) that controls slew rate by controlling a drive signal of the output MOSFETS turned on.

The difference seen between Muljono et al. and the present invention is that the Muljono et al. does not show the detailed layout of the output MOSFETs as called for in claims 9-11. However, such layout in an integrated circuit is well known in the art to save space and reduce power consumption. Therefore, outside of non-obvious results, the obviousness of the detailed layout as called for in claims 9-11 will not be patentable under 35USC 103(a).

Regarding claim 13, figure 7 of Muljono et al. does not show latch circuits, which clocked by clock signal, for latching respective output of the first control means (741) as called for in claim 13. However, it is known in the art latch circuits (flip flop circuit) clocked by a clock signal synchronously provide output signals to desired destination. Signals arrive at the desired target at the same time will synchronously trigger the intended device thus preventing erroneous operation. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include latch circuit at the respective output of the Muljono et al.'s circuit 741 for the purpose of providing synchronous operation thus preventing erroneous operation.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In this regard, applicant's cited prior art has been carefully considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P. CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan T. Lam
Primary Examiner
Art Unit 2816

8/17/2005